Unlocking the ASEAN Power Grid (APG) Potential

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ASEAN Power Grid (existing and planned lines)

Status and new opportunities

Interconnection progressed and targets determined
- Existing transmission capacity stands at 7.7 GW (mainly bilateral in the GMS). Future target is 17.6 GW by 2040, consisting of 18 interconnections (9 new and 9 existing).

Net-zero power system requires strong grid and interconnections
- Interconnection over a larger area enables the efficient integration of diverse and unevenly distributed renewable energy sources (hydro, wind, solar, storage), thereby reducing the cost of supply and improving reliability.

Clean energy demand surges due to NTZ, RE100, and CBAM
- Singapore plans to import 4GW clean power from its neighboring countries and granted conditional licenses to the developers in some ASEAN countries.
- Malaysia announced the establishment of an Energy Exchange Malaysia (ENEGEM) in April 2024 for green electricity with neighboring countries.
- Regional Renewable Energy Certification (REC) framework under ASEAN is being studied by the ACE for green tracking.

Subregional multilateral power trading schemes are tested and emerging more
- Lao PDR-Thailand-Malaysia-Singapore Power Integration Project (LTMS-PIP) demonstrated a successful multilateral power trade arrangement. Brunei Darussalam, Indonesia, Malaysia and the Philippines Power Integration Project (BIMP-PIP) was launched in September 2023. Laos-Thailand-Cambodia (LTC) interconnection pre-FS and shadow trading (short-term regional market) agreed to be implemented under the GMS/ASEAN.

ASEAN political commitment increases for multilateral regional trade
- APG MOU is set to be elevated to APG Framework Agreement for power trade, scheduled for signing in 2025, under which implementation protocols plan to be developed for institutional arrangement, market development, and infrastructure planning/operation.
Holistic Approach for APG Development

**APG Infrastructure** to be developed by SOEs or a separate entity with its commercial viability dependent on revenue generated from power usage. Given potential political risks in the initial phase due to lack of ASEAN common rules and regulations, **start with majority ownership from public counterparties** with plans to incorporate private sector participation into the equity structure in subsequent stages.

**APG financing mechanism** to structure bankable projects, mobilize capital (including concessional funds), and manage various risks including but not limited to technical, regulatory, commercial, and political risks, leveraging **existing ASEAN facilities/partnerships** where possible, including the consideration to establish a dedicated APG financing facility to accelerate investments needed.

- First loss funds
- Guarantee mechanisms
- Cross border infrastructure funds
- TA/feasibility studies, trust funds, etc.

Initially, IPPs rely on securing the majority of their revenue through **long-term bankable physical contracts**. Over time, the IPPs could move these to become **financial contracts** and source their physical trade through the ASEAN regional power pool and thereby have a more **flexible short-term optimization of assets**.

Regional power market **coexisting**
- IPPs bilateral trading with national utilities through long-term PPAs
- National utilities’ grid-to-grid bilateral and multilateral trading
- Short-term day ahead market
- Renewable energy certificate (REC)

Minimum requirements and agreements for **ASEAN regulatory harmonization** through
- ASEAN power trade framework
- Operational protocols
  - Institutional arrangement
  - Market development (rules, dispute resolution)
  - Infrastructure planning/operation (third party access, wheeling price, operational standards, etc.)
ADB’s Potential Financial Products and Services

ADB utilizes a wide range of products and services to deliver on a comprehensive development mandate.

- **Knowledge and Partnerships**
  - Country / economics research
  - Policy dialogue and advisory
    - Sectoral and thematic
    - Regional cooperation and integration
  - Transaction technical assistance
    - Capacity building grants
    - Reimbursable TA

- **Sovereign Lending and Guarantees**
  - Project investment lending
  - Program and sector development lending
  - Policy and results-based loans
  - Partial credit guarantees

- **Private Sector Debt and Equity**
  - Debt
  - Direct and indirect equity
  - Political risk guarantees
  - Trade finance
  - Cofinancing and syndication

- **Innovative Platforms**
  - Trust funds
  - Project preparation facilities
  - Blended / concessional finance platforms
  - Capital mobilization

- **Transaction Advisory Services**

- **Trusted Advisor Relationship with Member Countries**
  - Transaction technical assistance
  - Capacity building grants
  - Reimbursable TA

A hybrid solution to finance the APG priority interconnectors through country operations, and establish a regional APG financing facility to support the APG aspirations.
Thank you!